

ArcelorMittal USA

January 11th, 2018



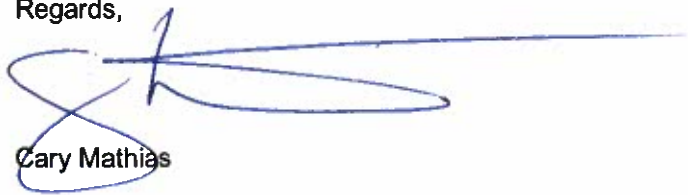
Mr. Brandon Pursel and Ms. Melissa Blankenship
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Mail Code LU-9J
Chicago, Illinois 60604-3507

**Subject: Data Sufficiency Evaluation
ArcelorMittal Indiana Harbor Long Carbon
East Chicago, IN**

Mr. Pursel and Ms. Blankenship:

ArcelorMittal USA LLC is pleased to submit this Response to Comments for the Indiana Harbor Long Carbon (IHLC) property located in East Chicago, Indiana. This document has been prepared to address comments received on 19 July 2018 from the United States Environmental Protection Agency (U.S. EPA) based on their review of the 30 May 2018 RCRA Facility Investigation (RFI) Data Sufficiency Evaluation for the IHLC property.

Regards,



Cary Mathias

Enclosures

c: Mark Pomfrey, Haley & Aldrich, Inc.

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11 January 2019
File No. 129719

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Attention: Mr. Cary Mathias
Regional Waste Manager

Subject: Response to Comments; Data Sufficiency Evaluation
Indiana Harbor Long Carbon
East Chicago, Indiana
ArcelorMittal USA LLC - Indiana Harbor East
EPA ID No. IND 005 159 199

Dear Mr. Mathias

Haley & Aldrich, Inc. (Haley & Aldrich) is pleased to submit this Response to Comments for the Indiana Harbor Long Carbon (IHLC) property located in East Chicago, Indiana. This document has been prepared to address comments received by ArcelorMittal USA LLC (ArcelorMittal) on 19 July 2018 from the United States Environmental Protection Agency (U.S. EPA) based on their review of the 30 May 2018 RCRA Facility Investigation (RFI) Data Sufficiency Evaluation for the IHLC property.

Introduction

IHLC shut-down operations in 2015, and the IHLC property is currently being marketed for sale for continued use as an industrial property. To expedite the marketability and sale of the IHLC property, ArcelorMittal is separating the on-site RCRA Corrective Action (CA) obligations from those of the ongoing ArcelorMittal Indiana Harbor East, IHE facility-wide RCRA CA. Further, ArcelorMittal intends to perform an accelerated RCRA CA on the IHLC property utilizing the U.S. EPA's recently published RCRA Facilities Investigation Remedy Selection Track (FIRST) – A Toolbox for Corrective Action (May 2016). The RCRA FIRST toolbox was developed using Lean techniques to improve the efficiency of the RCRA CA process. The RCRA RFI Data Sufficiency Evaluation, outlined in RCRA First Tool 4, was prepared to demonstrate project Data Quality Objectives (DQOs) have been satisfied for the IHLC property.

The following sections include the U.S. EPA Comments on the RFI Data Sufficiency Report (*presented in italic font*), followed by ArcelorMittal's responses to those comments (presented in normal font).

U.S. EPA General Comments and ArcelorMittal Responses

DATA GAP 1

U.S. EPA Comment: "Potential source areas of contamination were identified near monitoring wells IMW-02-00001, IMW-02-0004 and IMW-03-00029 and in the vicinity of the Water-Cooling Tower (Figure 6 - Summary of Exceedances in Groundwater). The Evaluation indicates in subsequent monitoring events that contamination is confined to the proximity of these wells. Due to the change in land use, and because subsequent sampling events were limited in scope and frequency, verification sampling must be performed to confirm that concentrations are stable or decreasing as AME has asserted. Any sampling or verification should be performed in accordance with a groundwater sampling verification plan."

ArcelorMittal Response:

ArcelorMittal agrees to complete verification groundwater sampling in accordance with a verification sampling plan for the above-mentioned areas of the IHLC property. The verification sampling plan, detailing groundwater sampling methodology, will be submitted for U.S. EPA review and approval prior to implementation. Please note, although the IHLC property is being marketed for sale, the land-use will remain industrial.

DATA GAP 2

U.S. EPA Comment: "EPA understands that no direct measurement of indoor air concentrations due to groundwater contamination has been taken, however, AME asserts the likelihood of on-site risk to be low due to other controlling factors. Quantifiable measurements must be taken in accordance with the June 2015 guidance document OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air. A work plan should be provided that includes co-located sub-slab and indoor air samples collected for VOCs using the TO-15 method where buildings are present."

ArcelorMittal Response:

On 16 October 2018, ArcelorMittal along with representatives from the U.S. EPA Region 5, including Melissa Blankenship, Brandon Pursel, and Bhooma Sundar, performed a walk-through of the IHLC property. Based on observations and statements made by the U.S. EPA, and in accordance with the OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air (U.S. EPA, June 2015), Section 2.4 (Air Exchange and Mixing), for the vapor intrusion scenario, considering the significant size, air infiltration, and natural ventilation of the current property building, any potential effects of vapor intrusion of vapor-forming chemicals will be mitigated via dilution. Therefore, no additional assessment for the vapor intrusion pathway is necessary.

DATA GAP 3

U.S. EPA Comment: "As the IHLC area is planned to be redeveloped, ArcelorMittal must submit a human health conceptual site model specifically for this parcel and identify the potential source areas as well as the likely migration pathways. Soil samples at different depth intervals should be taken to assess the risk associated with exposure to industrial workers, construction workers and redevelopment workers. While

the worker protection program for excavation workers is intended to stay with the property, it relies on an understanding of what exists in the subsurface. Taking into consideration EPA's comment in Data Gap 1, a cumulative risk characterization from all exposure media should be presented for each commercial/industrial worker scenario to summarize this understanding."

ArcelorMittal Response:

The IHLC property is being marketed for sale, however, the land use will remain industrial. Nonetheless, ArcelorMittal recognizes that a property-specific human health risk assessment will be necessary for the IHLC property as part of the separation from the IHE facility-wide RCRA CA. Therefore, ArcelorMittal agrees to complete verification soil sampling in accordance with a sampling verification plan for areas of the IHLC property where surface and subsurface soil exposure pathways are likely to be complete (e.g., unpaved areas). The verification sampling plan, detailing soil sampling methodology, will be submitted for U.S EPA review and approval prior to implementation.

U.S. EPA Specific Comments and ArcelorMittal Responses

U.S. EPA COMMENT NO. 1

- **RFI Data Sufficiency Evaluation, Section 2.2.2 Steel Finishing:** "Petroleum-based lubricants were used throughout the Bar Mill operation."
 1. *U.S. EPA Comment: "For completeness, please expand this section to include a general description of ... [how] lubricants were used across IHLC. While methane may also be a biogenic substance, it is necessary to be able to distinguish whether it is an indicator of possible impacts or a byproduct of degradation from historical impacts of petroleum products."*

ArcelorMittal Response:

Lubricating oils were used as part of the steel making process in the No.1 Electric Arc Furnace/Billet Caster area and the steel hot rolling, refurbishing, and conditioning processes in the 12" Bar Mill/Annealing Facility/No. 6 Roll Shop. Lubricating oils were stored in 55-gallons drums and in ASTs located in the 12" Bar Mill/No. 6 Roll Shop. Used oils were consolidated in ASTs located in the 12" Bar Mill prior to disposal off-site.

U.S. EPA COMMENT NO. 2

- **RFI Data Sufficiency Evaluation, Section 2.2.3 Steel Roll Refurbishing:** "When in use, PCE was stored in an above ground storage tank (AST) formerly located west of the No. 6 Roll Shop."
 2. *U.S. EPA Comment: "For completeness, expand this section to also include and [sic] storage activities pertaining to trichloroethylene (TCE) and other degreasing chemicals used at IHLC. Also expand the discussion to include whether TCE or PCE was used primarily more frequently [sic] in operations at IHLC."*

ArcelorMittal Response:

Tetrachloroethene (PCE) was used until approximately 1993 to clean roll bearing housings and gearboxes prior to processing in the No. 6 Roll Shop. PCE was stored in a 750-gallon AST located west of the No. 6 Roll Shop and 55-gallon drums located within the No. 6 Roll Shop. Other degreasing chemicals included Stoddard Solvent (mineral spirits) stored in 55-gallon drums and in an 800-gallon AST in the No. 6 Roll Shop. Based on the information available, PCE was the primary solvent used in historical operations at IHLC.

U.S. EPA COMMENT NO. 3

- RFI Data Sufficiency Evaluation, Section 3.1.2 Site Geology: "Methane has been reported throughout much of this silty sand unit. The presence of methane was inferred by soil sample headspace screenings in which elevated readings were measured with flame ionization detectors (FIDs), while measurements with photoionization detection (PIDs) indicated non-elevated results. This combination of results is generally considered to be indicative of methane, typically resulting from the decomposition of organic matter. The presence of methane is consistent with the low dissolved oxygen content and strong reducing conditions that were typically observed in groundwater collected from this horizon. The apparent presence of methane in non-impacted wells suggests that the methane may be, at least partially, naturally occurring, and that soil sample headspace screening may not be indicative of chemical impacts to the soil/groundwater."

3. U.S. EPA Comment: *"This statement is somewhat misleading. The reader is led to believe that direct measurements of methane have been taken, however data submitted to EPA does not reflect this. It is concluded that any methane is likely biogenic based on this inference, although it is also appropriate to infer that historic releases of petroleum products may also be responsible for FID readings. Revise this statement to include the likelihood that petroleum products may be responsible for any methane production based on all available data at IHLC."*

ArcelorMittal Response:

The above-mentioned statement will be revised as follows:

Indications of potential methane have been reported throughout much of this deeper silty sand unit. The presence of methane was inferred by soil sample headspace screenings. Elevated readings were measured with flame ionization detectors (FIDs), while measurements with photoionization detection (PIDs) indicated non-elevated results. This combination of results is generally considered to be indicative of methane, typically resulting from the decomposition of organic matter. The presence of methane is consistent with the low dissolved oxygen content and strong reducing conditions that were typically observed in groundwater collected from this unit. Petroleum products may be responsible for methane production; however, because historical releases of petroleum products at the IHLC property were likely to be surficial, the inferred methane presence is likely to be naturally occurring within this horizon.

U.S. EPA COMMENT NO. 4

- RFI Data Sufficiency Evaluation, Section 3.6.6 Sediment: "...the US. EPA and ArcelorMittal have agreed that relative to RCRA Corrective Action at the IHE facility, assessment of the IHSC and Indiana Harbor sediments is not relevant because:
 - As part of SEPs established by the Consent Decree, discussed previously in Section 1.5, ArcelorMittal will remediate working dock face sediments. The remainder of the IHSC and Turning Basin will be remediated by the US. Army Corp Of Engineers with funds supplied PRPs; and,
 - The contribution, if any, from the IHE facility, thereby the IHLC property, cannot readily be distinguished from the documented upstream sediment loading from other industrial facilities. Therefore, based on the above, of this exposure pathway is incomplete for the IHLC property."
- 4. *U.S. EPA Comment: "While somewhat outside of the scope of this document, it should be noted that this statement does not support the conclusion that there is an incomplete pathway for sediment impacts. Efforts to remediate aggregate contributions to sediment contamination does not create an incomplete pathway. Rather, it is an effort to correct possible but unconfirmed contributions by ArcelorMittal at the IHLC (and site-wide) to sediment in the Indiana Harbor Shipping Canal. Furthermore, because sources of contributions have not been distinguished it is premature to state that there is no complete pathway. It would be more appropriate to state what controls are in place to prevent future impacts to sediment from the IHLC, especially considering the dredging work to be completed in the IHSC."*

ArcelorMittal Response:

The above will be revised as follows:

Sheet pile revetments are in place and are maintained by ArcelorMittal to prevent future impacts to the IHSC from the IHE facility. Dredging work is to be completed in the IHSC by the US. Army Corp Of Engineers with funds supplied PRPs.

U.S. EPA COMMENT NOS. 5, 6, AND 7

- RFI Data Sufficiency Evaluation, Section 4:
- 5. *U.S. EPA Comment: "It is important to recognize through the development the responses to these questions that ArcelorMittal is currently in the process of updating its QAPjP. The responses to these questions can only be reasonably answered within the scope of approved SAPs and QAPPs, however ArcelorMittal should be prepared to respond to any deficiencies if updates to the QAPP affects data sufficiency. This would include assessing data outliers and updating procedures to address them."*

ArcelorMittal Response:

ArcelorMittal agrees to respond to any to any deficiencies if updates to the QAPP affects data sufficiency.

- RFI Data Sufficiency Evaluation, Section 4: "Based on a review of the Phase I and Phase II RFI Reports and subsequent US. EPA comments and ArcelorMittal responses, no concerns associated with insufficient sampling of COCs were expressed by the US. EPA for the IHLC property. Further, based on the information presented herein, COCs appear to have been fully assessed."
6. *U.S. EPA Comment: "EPA has not expressed concerns regarding the assessment of COCs at IHLC, however this is primarily due to the expectation that land use would not change. With ArcelorMittal seeking options for redevelopment and a change in land ownership, EPA believes confirmation samples at all areas where exceedances of applicable on-site screening criteria have been detected are appropriate before this question can be reliably responded to".*

ArcelorMittal Response:

Although the IHLC property is being marketed for sale, the land-use will remain industrial. In addition, as discussed above, ArcelorMittal has agreed to complete groundwater verification sampling to confirm concentrations, and to perform a property-specific human health risk assessment for the IHLC property.

- RFI Data Sufficiency Evaluation, Section 4: "Based on a review of the Phase I and Phase II RFI Reports and subsequent US. EPA comments and ArcelorMittal responses, no concerns were communicated by the US. EPA related to insufficient sampling of impacted or potentially impacted media. Further, based on the information presented herein, the extent of contamination has been reasonably bounded at the IHLC property. Based on the review of the Phase I RFI and Phase II RF/findings, summarized herein, the remaining impacts in on-site groundwater do not appear to be increasing in extent or in concentration."
7. *U.S. EPA Comment: "See the above comment. While EPA acknowledges that existing contamination may not cause an unacceptable risk, it is still good practice to confirm that existing contamination detected at impacted wells IMW-02-00001, IMW-02-00004 and IMW-03-00029 has remained stable or decreased prior to seeking a change in land ownership.*

ArcelorMittal Response:

As stated in Data Gap 1, ArcelorMittal agrees to complete verification groundwater sampling in accordance with a sampling verification plan for the above-mentioned areas of the IHLC property. As stated previously, the verification sampling plan, detailing groundwater sampling methodology, will be submitted for U.S EPA review and approval prior to implementation.

U.S. EPA COMMENT NO. 8

- RFI Data Sufficiency Evaluation, Table 3 Summary of Exceedances:
8. *U.S. EPA Comment: "Detections of cis-1,2-dichloroethene above Maximum Cleanup Levels (MCLs) is missing from this table. Despite being below site specific screening criteria to denote risks to likely receptors, inclusion of this compound is warranted considering the fate and transport of other chlorinated solvents."*

ArcelorMittal Response:

Table 3 will be revised as requested in the comment.

Closing

Should you have any questions regarding the enclosed, please do not hesitate to contact us.

Sincerely yours,
HALEY & ALDRICH, INC.



Mark Pomfrey
Senior Project Manager



Peggy Stonier
Assistant Project Manager

c: ArcelorMittal; John Hill

References

United States Environmental Protection Agency, Comments on Data Sufficiency Evaluation – Indiana Harbor Long Carbon, 19 July 2018.

Haley & Aldrich, Inc., this Resource Conservation and Recovery Act (RCRA) Facility Investigation Data Sufficiency Evaluation for the Indiana Harbor Long Carbon Facility, May 2018.

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